

Legitimacy of informal institutions in contemporary local forest management: insights from Ghana

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Abstract Many studies have recommended more conscious consideration of informal local norms in the pursuit of officially-recognized local forest management. The justification is that management systems grounded in local norms are well suited to local realities and correspond better with the interests and capacities of local forest users than expert-knowledge systems, which generally require a lot of external support to function. In Ghana, as in many other postcolonial countries, informal local norms were effective in regulating forest resource use before they were pushed into the background following the centralization and formalization of forest management by the colonial administrations. It is however unclear if and to what extent the local norms have retained their legitimacy in the face of massive institutional changes and breath-taking land use dynamics. Based on empirical study of five Ghanaian local forest contexts, this paper explores the role of informal local norms in contemporary local forest management, building theoretically on the concept of institutional legitimacy. Two forms of informal local forestry norms were identified: taboo norms and non-taboo norms. While the non-taboo norms had legitimacy in the present day local communities, some of the taboo norms no longer had legitimacy. The findings indicate that due to modernization, including adoption of Christianity, formal education and commercialization, sacred myths alone do not provide legitimacy for the taboo norms any longer. It is inferable from the findings that to have legitimacy and be useful in contemporary local forest management, both the taboo and non-taboo norms require legitimacy from process and output justifications such as their presumed fairness or instrumental relevance for achieving what local people want to do with their forests.

Keywords Informal institutions · Legitimacy · Local forest management · Ghana

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Introduction

Since ancient times, people have used and managed forests in their localities, and have developed rules and mechanisms to regulate forest use (Etienne et al. 2013; McGregor et al. 2009; Stevenson and Harrison 1992). In post-colonial countries, the creation of the colonial states and their associated formal systems led to centralization and formalization of forest management. Forest management was made the responsibility of state institutions with formally trained personnel, ostensibly for better management of forests but more importantly to secure resources and revenues for the states (Ghate 2009; Hirsch 1990; Kotey et al. 1998; Mohanty 2004). Local people and their informal ways of using and managing forests were pushed into the background, in some cases criminalized (Brown and Lassoie 2010; Edmunds and Wollenberg 2003; Kotey et al. 1998; Nanang and Devung 2004; Nanang and Inoue 2000). Not surprisingly, there was local resistance to this form of forest management. In the late 1970s, management strategies that seek to involve local people in officially-recognized forest management emerged, with the rationale to enhance effectiveness, efficiency and equity in forest management (Mohanty 2004; Kotey et al. 1998; Brown and Lassoie 2010). However, the results of implementation efforts have been unsatisfactory (Oyono 2004; Stearman 2006), largely because they have involved the introduction of expert knowledge systems of forest management in local communities. The technical, managerial and financial requirements of the expert-knowledge systems are incompatible with local circumstances, resulting in lack of local ownership and strong dependency on external support to function (Pokorny and Johnson 2008). In view of this, several authors have recommended consideration of informal local norms in the pursuit of officially-recognized local forest management (see Agrawal and Ostrom 2001; Ostrom et al. 1994; Ostrom 1994, 1990). Indeed, in some empirical studies, local norms were found to be effective and efficient in regulating the use of local resources (Colding and Folke 2001; Gibson et al. 2000; Warren and Pinkston 1998).

However, the recommendation mentioned above assumes that informal local norms in post-colonial country contexts have prevailed and retained their legitimacy even after they were pushed into the background when forest management became centralized and formalized. This may not be true because institutional legitimacy is not static; it does change over time (Helmke and Levitsky 2004; Jentoft 2000; Ostrom and Basurto 2010; Steffek 2003). The legitimacy claims of rule-setters and the legitimacy beliefs of subjects are constantly re-negotiated and they are subject to review, assessment and re-evaluation (Black 2008; Gearey and Jeffrey 2006; Kull 2002; Quack 2010). Moreover, legitimacy is influenced by changes in societal values (Nielsen 2003). Before this background, this paper, based on Ghanaian contexts, explores which local norms of forest management have legitimacy in the present day local communities and from what the legitimacy is derived.

Continuing from the introductory section, the second section of the paper presents the theoretical and conceptual background, *inter alia*, highlighting the differences between formal and informal institutions and ending with a typology of possible sources of institutional legitimacy. The third section presents the Ghanaian local forest contexts studied and the methods employed. The fourth section presents the findings of the study. The fifth section discusses the findings and concludes the paper.

Definitions and concepts

For a study on informal local norms and their role in contemporary local forest management, the concepts of institutions and institutional legitimacy provide appropriate

theoretical background, as they provide a theoretical and conceptual frame for studying societal rules and norms and their influence on how people act. This section defines ‘institutions’ as employed in the paper, highlights the difference between formal and informal institutions, and proposes a typology of institutional legitimacy based on how they are derived.

Institutions

Institutions, whether official rules or informal norms, influence the behavior of people in a given community: they create incentives for certain behavior and disincentives for others (Hodgson and Calatrava 2006; Holmes et al. 2013; Ostrom 2005; Pejovich 1999). Informed by the meaning of the term communicated by many authors (e.g. Leach et al. 1997, 1999; Colding et al. 2003; Helmke and Levitsky 2004; Grzymala-Busse 2010; Hodgson and Calatrava 2006; Lewins 2007; Ostrom et al. 1994; Pacheco et al. 2008), this paper is based on the operational understanding of institutions as the shared behavioral expectations in a given community, the flouting of which attracts sanctions, and the associated actors. They could be official rules, social norms or cultural-cognitive values, a continuum from the conscious and legally-enforced to the unconscious and taken for granted (Scott 2001). The focus on informal local forestry norms makes this understanding of institutions most appropriate for the study.

According to the operational definition of institutions adopted, informal local forestry norms, which are the focus of this paper, constitute informal institutions. Beyond this cursory categorization, it is necessary to properly define what informal institutions are and what distinguishes them from their alternative formal institutions. Helmke and Levitsky (2004) defined formal institutions as institutions created, communicated and enforced through official channels; and informal institutions as those, usually unwritten, which are created, communicated and enforced through unofficial channels. Formal institutions are usually codified: flouting them attracts legal sanctions like police arrest and prosecution in law courts. Informal institutions, on the other hand, are usually not codified. The sanctioning mechanisms may even be illegal. They include non-violent displays of social disapproval like hostile remarks, gossip and ostracism, and violent ones like extrajudicial violence (Helmke and Levitsky 2004, p. 733). Table 1 presents the key distinctions between formal and informal institutions.

However despite the sharp dichotomization, institutions may not be easily classified as formal or informal in practice. Many institutions have both formal and informal attributes. Also, the same institution could be informal and formal at different time periods. For instance, though customary institutions are historically informal in nature, Berry (1989) and (1993) provide ethnographic details of how some customary institutions in Africa have transformed into formal institutions. The categorization in Table 1 is a simplified description of the complex reality for easy understanding of the terms.

Institutional legitimacy

In order to be functional and useful in local forest management, local norms need to have legitimacy- and not just legality, as a narrowly legalistic perspective might imply (Bouma and Ansink 2013; Brown and Lassoie 2010; Jenny et al. 2007; Reimann et al. 2012). De Soysa and Jütting (2007) and Jentoft (2000), therefore, distinguished between institutional legitimacy and institutional legality, noting that local norms can have legitimacy even when they lack official legality. Kull (2002) explained this with a situation in Madagascar

Table 1 Summary descriptions of formal and informal institutions

Criteria	Formal institutions	Informal institutions
Creation	Official, exogenous, broader jurisdiction	Unofficial, mostly endogenous and local
Communication	Written communication, official announcements	Folktales, observation
Enforcement	Official e.g. police arrest, prosecution in law courts	Unofficial e.g. gossip, ostracism, extra judicial violence
Documentation	Mostly documented	Mostly undocumented
Codification	Codified (legal)	Mostly not codified (could be illegal)
Identification	Easy to be identified by researchers	Difficult to be identified by researchers
Examples	State-enforced rules, organizational rules State institutions like police, courts	Traditions, customs, taboos, social norms Clans, mafias

Source Own tabulation based on Helmke and Levitsky (2004), Lewins (2007), Leach et al. (1997), Pejovich (1999) and Brown and Lassoie (2010)

where restrictive national fire rules have official legality but lack local legitimacy, while informal opportunistic burning negotiated by co-users of a pasture have local legitimacy but are officially illegal.

In general terms, Bernstein (2005, p. 142) defined legitimacy as ‘the acceptance and justification of a shared rule by a community’. Similarly, Reimann et al. (2012) conceptualized organizational legitimacy as the local acceptance of an organization, which is essential for the survival of the organization. For the study on which this paper is based, the operational definition of institutional legitimacy adopted is ‘the acceptance and justification of an institution as the way to do things in a given community’.

It is understood to be a social construct that reflects congruence between a legitimated entity and the shared beliefs of its audience (Horne 2009; Suchman 1995). It is gained through gradual and incremental processes (Johnson et al. 2006; Pinkerton and John 2008). The concept is applicable to a broad range of social phenomena, from social processes, policies, and structures to agents, and it describes the formal and informal ways in which they are validated and consequently empowered (Gearey and Jeffrey 2006). Specifically tied to community institutions, legitimacy is rooted in the notion of popular acceptance (Kull, 2002)—that the affected public accepts that leaders should have certain rights and responsibilities, that rules are fair and just, and that certain institutions are the proper avenues for certain activities such as management or dispute settlement. In conceptual terms, legitimacy is a strong analytic device to explain how institutions and regimes persist over time *without coercion* (Gearey and Jeffrey 2006). Indeed, a dictatorship regime can persist without legitimacy by employing coercion. But to survive without coercion, a regime requires legitimacy.

Institutional legitimacy could be put into three main categories according to how it is derived: source-based legitimacy, process-based legitimacy and output-based legitimacy (Table 2). (1) *Source-based legitimacy* is where an institution derives its legitimacy from audience acceptance of its origin (Bodansky 1999). It includes acceptance based on allegiance to a common history, ethnic origin, belief, myth, culture, tradition or other social identity (Bernstein 2005; Steffek 2003; Suchman 1995). These were particularly important in ancient societies, where holiness, providence or divinity explained the existence and acceptance of authority and rules (Bodansky 1999; Steffek 2003). It is a naturally-felt legitimacy that is normally unquestioned and therefore needs no argumentative

justification (Steffek 2003). Source-based legitimacy also includes more contemporary sources, like audience acceptance of an institution based on expert knowledge (Bodansky 1999). (2) *Process-based legitimacy* is where an institution derives its legitimacy from audience acceptance of how it operates (Bodansky 1999; Franck 1990). In other words, where an institution is accepted because it conforms to socially-accepted procedures and values (Bernstein 2005; Suchman 1995). Examples include acceptance of an institution because it has rational argumentative justification (Dingwerth 2007; Kronsell and Bäckstrand 2010; Steffek 2003) or because it conforms to democratic principles (Bodansky 1999; Horeth 1999; Steffek 2003), such as participation, inclusion and accountability (Beisheim and Dingwerth 2008; Dingwerth 2007; Kronsell and Bäckstrand 2010). Scharpf (1999) called this type of legitimacy input legitimacy. Bodansky (1999) mentioned judicial and administrative authority as examples of institutions that derive their legitimacy from the presumed fairness of how they operate. (3) *Output-based legitimacy* is where an institution derives its legitimacy from audience satisfaction with its outcome (Bodansky 1999; Hogl et al. 2012; Horeth 1999; Horne 2009). Legitimacy, in this instance, is based on instrumental importance of the institution, where it is accepted because it helps to achieve certain desired outcome. The desired outcome could be policy effectiveness, institutional effectiveness, compliance effectiveness or positive environmental outcomes (Kronsell and Bäckstrand 2010).

The three types of institutional legitimacy have linkages and they are non-exclusive. An institution may derive legitimacy from multiple considerations. Moreover, one type of institutional legitimacy can trigger another type. For instance, the desirability of the manner in which an institution operates (process-based legitimacy) can trigger outcomes that are also desirable (output-based legitimacy). Therefore in practice, it may be difficult to assign the legitimacy of a given institution to one category. The differentiation in this section is simplification of the complex reality for easy understanding of the possible ways in which institutions can derive legitimacy. Table 2 summarizes and exemplifies the typology, and was used as the analytic lens for studying legitimacy of informal local forestry norms in Ghana.

Case context and methodology

Ghanaian forestry context

Ghana is a tropical West African country with an estimated population of 25 million people (Ghana Statistical Service 2012). The country covers a land area of about 24 million hectares, divided into two main vegetation zones (Fig. 1).

The about one-third southern portion is covered with high forests and the remaining portion by savannah vegetation with scattered trees. There is a band of transition vegetation between the high forest zone and the savannah zone. About 1.8 million hectares of the forests in the high forest zone have been put under reservation protection (Affum-Baffoe 2009; Marfo 2009a) in the form of 282 protected areas (MLNR 2012). About 75 % of the protected areas are for timber production and the remaining for biodiversity conservation and ecotourism (MLNR 2012; Hawthorne and Abu-Juam 1995; Kotey et al. 1998). Outside the protected areas, there is about 5.5 million hectares of forests occurring as forest patches and scattered trees on farms and fallow lands (Affum-Baffoe 2009).

Table 2 Possible sources of institutional legitimacy

Source type	Examples
1. Source-based legitimacy	Myth, tradition, culture, ethnicity, expertise
2. Process-based legitimacy	Democracy (participation, inclusion, accountability), argumentative justification, presumed fairness of institutions
3. Output-based legitimacy	Resource conservation, effective management, equity

Source Own tabulation based on Kronsell and Bäckstrand (2010), Bodansky (1999), Steffek (2003) and Suchman (1995)

Forests play crucial roles in the Ghanaian economy. The forestry sector has traditionally ranked as the third foreign exchange earner after cocoa and gold (Kotey et al. 1998). Though difficult to quantify, the sector's contribution to local livelihoods is immense (Osei-Tutu et al. 2010). Ghana's forests also house diverse plants and animals, some of which are endangered or endemic (Hall and Swaine 1981; Kotey et al. 1998). As a result of timber exploitation, farming, and other anthropogenic activities, Ghana's forests have reduced in size and quality over the years, with an estimated deforestation rate of 65,000 hectares per year (Kotey et al. 1998; Marfo 2010). The forest situation was described in 2010 as that of gradual forest degradation rather than deforestation (Forestry Commission 2010).

In pre-colonial Ghanaian society, local chiefs controlled the use of land and natural resources using cultural traditions and norms (Attuquayefio and Gyampoh 2010; Sasu 2005). Commercial exploitation of forests began in the 1870s under the colonial administration (Kotey et al. 1998; Oduro et al. 2011; Sasu 2005). Following the establishment of a Forestry Department in 1901, some of Ghana's forests were reserved as permanent forest lands to be managed by the colonial state. Progressively, the colonial state appropriated control over forests and forest resources (Kotey et al. 1998; Oduro et al. 2011). The first forest policy, adopted in 1948, encouraged maximum state exploitation of timber in the areas outside the reserved areas before farmers occupy those places (Kotey et al. 1998; Oduro et al. 2011). Ghana obtained independence from colonial rule in 1957. However, the post-colonial state kept the official systems introduced by the colonial administration and continued to appropriate control over forest resources (Kotey et al. 1998). In 1994, reform of the forestry sector led to the adoption of a new forest and wildlife policy that encouraged local participation in forest management and sustainable management of un-reserved forests (Kotey et al. 1998; MLNR 1994). A Community Forest Committee approach adopted by the Forestry Department (currently called the Forest Services Division) has only achieved passive local participation in forest management (Osei-Tutu 2011). There have been calls for more active local participation in forest management (Forest Watch Ghana 2010). In 2012, the forest and wildlife policy was revised again. The 2012 Ghana Forest and Wildlife policy places emphasis on non-consumptive use of forests and balance between timber production and marketing to satisfy, particularly, domestic wood demands (MLNR 2012). With state domination of forest management since the 1940s and passive involvement of local people by the state forestry authority since the 1990s, informal local use and management of forest resources has been kept in the background and not part of mainstream Ghanaian forestry.

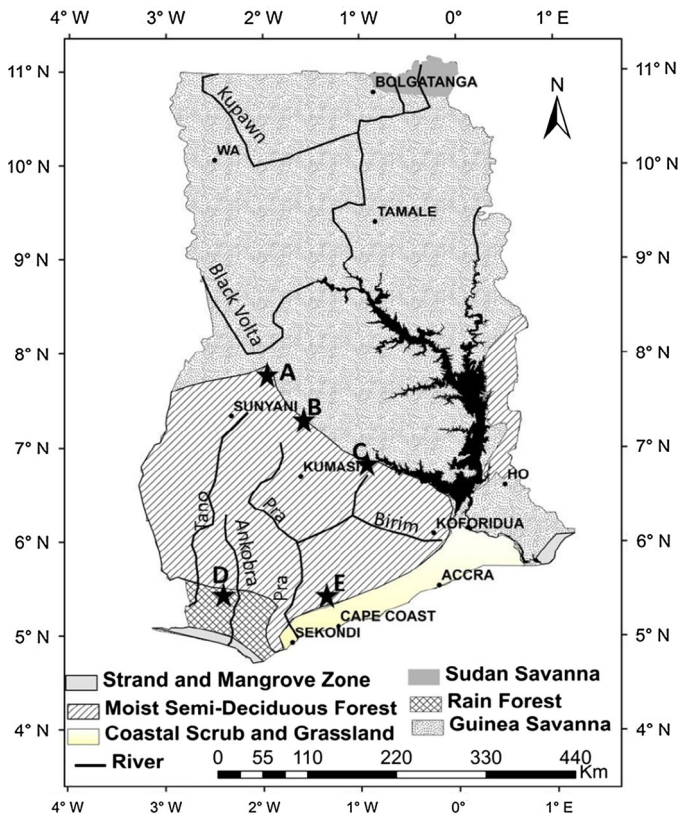


Fig. 1 Map of Ghana showing vegetation zones and approximate locations of study sites. (A Boabeng-Fiema monkey sanctuary, B Ebenso-Aworapataa plantation, C Juaso Forest District, D Quarm Farms forests, E Adwenaase community forest)

Study sites and data collection

There are isolated reports on locally-managed forest areas in Ghana (e.g. Dorm-Adzobu et al. 1991; Fargey 1993; Barre et al. 2009). However, there is no systematically-developed database of areas in Ghana where forest resources are managed with informal local norms and practices. The study sites were therefore identified through review of the available reports and discussions with key informants. Triangulating own thoughts based on review of the available reports with the recommendations of the key informants, five sites were purposively selected for the study: a state forest reserve, two community forests and two private land forests, respectively controlled by the state, communities and individuals (Table 3).

The data collection was done in two phases. The first phase, which was more exploratory, was done in August–November 2012. The second phase, to validate deductions made from the first phase data and collect additional data, was done in August–November 2013. The data collection was guided by two overarching questions: (1) What are the informal local institutions of forest resource use and management in the contemporary local

Table 3 Summary description of study sites

Site	Summary description	Control
Boabeng-Fiema monkey sanctuary, Brong Ahafo Region	450 ha outskirts forest with people-friendly sacred monkeys, presently used for ecotourism	Community (collective)
Adwenaase community forest, Central Region	215 ha sacred forest, an ancestral town that converted into a forest after it was abandoned, presently managed for timber and for posterity	Community (collective)
Chainsaw milling in Juaso Forest District, Ashanti Region	A forest district known for officially prohibited but informally accepted chainsaw milling of trees into lumber for sale, involving informal tree access arrangements	Individual (farmers)
Quarm Farms Forests at Pebase village near Asankragwa in the Western Region	66.8 ha family land with trees, which the family exploits for home use and allocate to other people	Individual (family)
Ebenso-Aworapataa taungya plantation, Ashanti Region	750 ha teak plantation established by local farmers in a state forest reserve (Asubima forest reserve), and for which the farmers have organized themselves into a local taskforce to monitor and arrest timber theft	State

communities? (2) Are the identified local institutions accepted and justified as the way to live and do things in the respective communities? Why are they accepted and justified as such or not?

Informed by its qualitative nature, the study employed qualitative data collection methods: review of available reports, interviews, focus group discussions and personal observation (Chang and Hsu 2006; Dearnley 2005; Jersild and Meigs 1939; Kitzinger 1995; Powell and Single 1996). Information from one source complemented and validated information from the other sources as recommended for case study research (Yin 2009). Snowball technique (Biernacki and Waldorf 1981; Miller and Brewer 2003) was employed to identify the key informants, where key informants were asked which other people are ideal informants for the study. The key informants were local forestry and wildlife officers, local chiefs, community level local government and site management boards. In addition to the key informant interviews, community people were randomly selected and interviewed. In total, 110 interviews and 10 focus group discussions were conducted. Though many local norms were identified at each study site, the analysis focused on those that have relevance for the management of local forests and the resources therein. Because institutions are influenced by the contexts in which they are embedded (Ostrom et al. 1994; Ostrom 2005), the data collection also considered the biophysical condition of the local resources in question and the socioeconomic condition of the local communities through review of relevant reports and personal observation.

Results

In line with the guiding questions spelled out above, the results section is structured into two parts. The first part identifies and characterizes the resource use and management norms at the study sites in a more descriptive manner, and the second part analyses the legitimacies of the local norms.

Table 4 Local norms of forest resource use and management at the study sites

Site	Local norms of forest use and management	
	Taboo norms	Non-Taboo norms
Boabeng-Fiema monkey sanctuary, Brong Ahafo Region	No hunting, eating or harming of monkeys No visitation to stream in forest when menstruating or with black pot	No tree cutting, burning or farming in forest No dogs in the community
Adwenaase community forest, Central Region	No entry into forest on certain days	No unauthorized tree cutting or farming in forest
Chainsaw milling in Juaso Forest District, Ashanti Region		No timber exploitation on the private lands without prior informal permission
Quarm Farms Forests at Pebase village near Asankragwa in the Western Region		No timber exploitation on the family land without prior informal permission
Ebenso-Aworapataa taungya plantation, Brong Ahafo Region		Local taskforce monitoring of the plantation to ensure no unauthorized exploitation of timber

Local resource use and management norms

The local norms of forest resource use and management identified at the study sites were of two types: taboo local control norms and non-taboo local control norms (Table 4).

The taboo norms were found at the two community forest sites. They were based on mythical beliefs, prohibiting certain resource use practices because gods and ancestors forbid them. They induced compliance through the belief that calamities befall people who flout them. The classification of this type of informal local forestry norms as taboos norms agrees with the characterization of resource and habitat taboos by Colding and Folke (2001) as prohibition imposed by social custom, which are based on cultural norms and do not depend on government for their promulgation and enforcement. The non-taboo norms, on the other hand, were found at all the study sites. At the two community forest sites, they were based on locally-respected right of the communities to impose use restrictions to protect the community forests and resources therein. At the private land sites, they were based on locally-respected right of local people to exercise control over timber on their lands. At the state forest site, it was based on locally-respected rights of local people to exercise control over timber on land allocated to them.

At the *Boabeng-Fiema* community forest site, the origin of the taboo was traced to the year 1827 when the first settlers arrived. It was narrated that a hunter among the first settlers, on a hunt, met at a stream two mona monkeys and two black and white colobus monkeys sitting beside a pot and a piece of white cloth (calico). He was fascinated by the sight and did not shoot the monkeys. He reasoned that the pot and white calico must be a fetish god and carried them home. The next day, the people found monkeys in front of the room in which the god was kept. They consulted an oracle to seek an explanation for the strange occurrence and were informed that the monkeys are children of the god the hunter carried home, called ‘Daworo’. They were informed that if they want to keep the god, they

have to live with the monkeys and not harm them. The taboo prohibiting harm to the monkeys was instituted and the people have lived with the monkeys since then. It was also forbidden to go to the stream where the monkeys were found with black pot or that women go there while menstruating, the explanation being that the stream is sacred and forbids them. In the 1980s, the site became important as an ecotourism destination, but the local forest in which the monkeys live was under threat because people cut trees from it and farmed portions of it. The ‘no harm to monkeys’ taboo, in principle, does not prohibit harm to the forest in which the monkeys live. To safeguard the forest, the community instituted the additional non-taboo prohibition of no tree cutting, burning or farming in the forest. Also, dogs were found to be unfriendly for the monkeys and unfavorable for the ecotourism. The closer the monkeys could get to people, the better it was for the ecotourism. However, dogs scared away the monkeys when they came down from the tree tops into the community. To prevent this, the community leaders banned the keeping of dogs in the community.

At the *Adwenaase* community forest site, the origin of the taboo prohibition was traced to 1820. The ancestors in the course of their migration from *Essemeja* in the Ashanti Region found a favorable environment for settlement under a big tree and settled there. They named the place ‘*Adwenaase*’, which literally means ‘under the *Adwena* tree’. The *Adwenaase* settlement became so well established that at its peak, it had 77 suburbs. However, the then incessant Ashanti tribal wars caught up with the ancestors. After two fights with the Ashantis, they moved, stopping at two places before finally settling at *Akropong* where the descendants presently live. *Akropong* is about 6 km from *Adwenaase*. With time after its abandonment, the *Adwenaase* settlement converted into a forest. This type of forest at a previous human settlement, called ‘*amanfoso*’ in the local Twi language is of historical and sacred relevance. Considered a sacred place, it was forbidden to go into the *Adwenaase* forest on Tuesdays and some other taboo days. It was believed that people who go there on a prohibited day may encounter strange incidences and may not find their way back home. People were also forbidden from cutting timber or farming in the forest without permission, not necessarily because the gods and ancestors forbid them, but more importantly to protect the forest from destructive use.

At the two private forest sites (*Quarm Farms* forests and *Juaso District* chainsaw milling), local people exercised control over naturally-grown trees on their lands, exploiting them for domestic use and informally granting other people the right to exploit the trees. The origin of this local control of trees on private lands was traced to pre formal forestry times. The Concessions Act of 1962 (Act 124) transferred the management right over all naturally-grown trees and the right to grant timber harvesting permit to the state. However, notwithstanding Act 124, local people have continued to exercise control over naturally-grown trees on their lands.

At the state forest site (*Ebenso-Aworapataa* plantation), the farmers in the plantation scheme had formed a local taskforce to monitor the plantation they have established in order to prevent unauthorized exploitation because timber theft was rampant in the locality. According to the official plantation scheme, the authority and responsibility to manage the plantation and prevent unauthorized exploitation is officially held by the local office of the Forest Services Division. Nevertheless, the local farmers exercised informal access control. The origin of this local arrangement was traced to 1996 when the farmers were allocated a degraded portion of the state forest to restore through the Taungya reforestation scheme (Blay et al. 2007).

Table 5 Legitimacy of local norms identified at study sites

Local norm	Source of legitimacy			Legitimacy	
	Source-based	Process-based	Output-based	In the past	In the present
No hunting, eating or harming of monkeys (Boabeng-Fiema site)	Myth (fear of calamity consequences)		Ecotourism and the associated benefits	×	×
No tree cutting, burning or farming in forest (Boabeng-Fiema site)			Ecotourism and the associated benefits	×	×
No dogs in community (Boabeng-Fiema site)			Ecotourism and the associated benefits	×	×
No visitation to stream in forest when menstruating or with black pot (Boabeng-Fiema site)	Myth (fear of calamity consequences)			×	
No entry into forest on certain days (Adwenaase community forest)				×	
No unauthorized tree cutting or farming in forest (Adwenaase community forest)			Communal desire to keep the forest for posterity and for sustained timber supply	×	×
No timber exploitation on private lands without prior informal permission (private land sites)		Respect for the right of farmers/family to exercise control over trees and disapproval of theft		×	×
Local taskforce monitoring to ensure no unauthorized exploitation of timber from plantation (state forest site)		Respect for the right of local taskforce to exercise control over trees and disapproval of theft		×	×

Legitimacy of local norms

The taboo norms that derived legitimacy from mythical (source-based) considerations only did not have legitimacy in the contemporary local communities. The taboo norms that also derived legitimacy from output considerations and the non-taboo norms, deriving legitimacy from process and output considerations, had legitimacy in the contemporary local communities (Table 5).

At the *Boabeng-Fiema* site, the ‘no hunting, eating or harming of monkeys’ prohibition was accepted and justified as the way to relate to the monkeys at the time of the field study. There had been no recent incident of monkey killing or harming and the community people did not imagine that anybody would harm the monkeys. In the 1960s, members of a

Christian sect in the community, by name Saviour Church, killed and ate the monkeys because they wanted to distance themselves from the fetish belief that the monkeys are children of gods. The faith-motivated killing of the monkeys did not occur any longer at the time of the field study. The non-killing of the monkeys could however not be attributed to the taboo alone. Because of the monkeys, the community has become an ecotourism destination, and this has yielded development and identity benefits for the community. Many of the respondents indicated that the ecotourism is a major reason for the friendly relationship the people have with the monkeys. Additionally, official rules have been enacted that criminalize killing of the monkeys. It was therefore necessary to find out, if at all, the taboo played any role in the non-killing of the monkeys. When probed, many of the respondents indicated that in addition to ecotourism reason and fear of official sanctioning, they believe flouting the taboo may provoke punishment from the gods in the form of calamities. They cited incidences in the past where people are believed to have suffered calamities because they harmed the sacred monkeys. The taboo prohibiting visitation to the local stream when menstruating or with black pot was accepted and justified as the way to live in the community about 20 years ago. In those days, the stream was the source of home-use water. Menstruating women waited at a distance from the stream for other people to fetch their water for them and no one went to the stream side with a black pot. It was believed that flouting the prohibition will provoke the anger of the stream god and result in calamity consequences. At the time of the field study, the prohibition was no longer perceived as the way to live in the community. The people no longer fetched home use water from the stream because deep wells with pumps had been provided in the community. In contrast to that, the non-taboo prohibition of ‘no tree cutting, burning or farming’ was largely accepted and justified as the way to live in the community. There had been no recent such occurrence in the community. For most of the respondents, the usefulness of the monkeys for the community was the main reason for accepting this norm. The ‘no dogs’ prohibition was also accepted, as no dog was seen in the community. The respondents mentioned communal support for the ecotourism as the main reason for the acceptance of this norm.

At the *Adwenaase* community forest site, the taboo prohibiting entry into forest on certain days was accepted and justified as the way to live in the community about 30 years ago. It was narrated that people feared to enter the forest on the prohibited days. At the time of the field visit, the prohibition was not perceived as legitimate any more. People were commonly seen entering the forest or emerging from it on the prohibited days. In contrast to that, the non-taboo prohibition of ‘no unauthorized tree cutting or farming’ was still perceived to be legitimate. Some people who flouted the prohibition in the 1990s were condemned by other people in the community and sanctioned by the local chiefs. During a focus group discussion with the community leaders, they explained that the entire community has agreed to keep the forest for posterity and for sustained supply of timber for communal use.

At the two private land sites, the non-taboo prohibition of ‘no timber exploitation without informal permission’ was accepted and justified as the way to live at the respective sites. Flouting was rare and subject to community condemnation. The people presumed the norm to be fair and accordingly respected the right of people to exercise control over trees on their lands. Flouting the norm was tantamount to theft, which the people disapproved. At the *Quarm Farms* forests site, the discussions suggested that any time a tree had been harvested from the family land, it happened with the prior knowledge and consent of the family. When asked if someone has ever harvested a tree without the family’s consent, the family head responded ‘no, no one will do that ..., that is not the way to do things’.

Regarding commercial chainsaw milling at the *Juaso District* site, the narratives indicated that the operations on the private lands are usually preceded by informal tree access negotiations and payments. When a chainsaw operator spots a tree of interest on a farm or fallow land, the usual practice is to contact the person who controls the land to express interest in the tree and subsequently negotiate payment to obtain informal access right.

Similarly, the ‘no unauthorized timber exploitation’ norm, enforced by the local taskforce at the state forest site, was accepted by the community. Flouting was rare. The people perceived the control by the local taskforce to be fair and, consequently, respected it. Timber thieves subject themselves to their arrest or run away to escape arrest. During a focus group discussion with the taskforce members, one of them remarked ‘the thief runs when he sees the owner’. In appreciation of their monitoring efforts, the Forest Services Division has rewarded the local farmers financially and assisted them logistically to enhance their monitoring work.

Discussion

As indicated in the results section, while the informal local forestry norms with exclusively source-based legitimacies no longer had legitimacy in the contemporary local communities, the others that derived legitimacy from other sources had legitimacy (Table 5). This section discusses this empirical observation.

Loss of source-based legitimacy

The observed loss of source-based legitimacy, manifested in the contexts studied as break down of the taboo norms that derived their legitimacy from their sacred importance only is an indication that mythical source-based legitimacy has lost its relevance in contemporary times. Indeed, this has been observed by other authors (e.g. Hechter 2009; Steffek 2003; Bodansky 1999), who noted that traditional sources of institutional legitimacy like divinity have lost their relevance in contemporary times. Modernity, which has many components, is mentioned by many authors as the reason for the loss of the traditional source-based (Bendix 1967; Bodansky 1999; Hechter 2009; Steffek 2003). In the contexts studied, adoption of Christianity was observed to be the main explanation for the loss of the mythical source-based legitimacy.

During the periods when the taboos at the two community forest sites had legitimacy, traditional religion, characterized by belief in fetish gods, was the dominant religion. People went to fetish shrines for spiritual solutions. Christianity and its close ally, formal education, were non-existent in the communities. Indeed during the period, only few locations in Ghana (then called Gold Coast) that had contact with the early Europeans had been exposed to Christianity and formal education (Debrunner 1967; Graham 1971). The forests were important for their sacredness and for their provision of domestic-use items. The dominance of traditional religion and associated allegiance to fetish gods enhanced acceptance and compliance with the taboos.

During the time of the study, Christianity had become the dominant religion, with the proportion of the people who profess to be Christians estimated to be 85 % at the *Adwenaase* site and 80 % at the *Boabeng-Fiema* site (Attuquayefio and Gyampoh 2010). The national estimate is 71 % (Ghana Statistical Service 2012). With the widespread adoption of the Christian faith, the majority of the people in the communities studied, but also the rest of Ghana, no longer consult fetish priests for spiritual solutions. They rather consult

churches for that purpose. The fetish gods, beliefs and practices are no longer of relevance for the majority of the people, and no longer strongly influence what they do (Greene 2002). In fact, the Christian faith frowns upon association with beliefs and practices considered fetish (Debrunner 1967). Consequently, the belief that people may suffer calamities if they flout the taboos has been undermined. The undermining of this key condition for compliance is the main reason for breakdown of the taboo norms. Indeed, the diminishing influence of Christianity on traditional norms and culture has been noted by other authors (Barker 2001; Luzar and Fragoso 2013).

In the exceptional case of the taboo norm at the *Boabeng-Fiema* site that prohibit hunting, eating or harming of the sacred monkeys, the taboo is seen to have legitimacy in the contemporary local community though it is based on myth. Indeed, other studies on this taboo (Fargey 1993; Tania et al. 2006) confirm that the taboo belief is a key reason for the non-hunting of the monkeys at the site. However as noted, the taboo, in addition to its sacred relevance, serves an additional purpose of enhancing the ecotourism at the site by protecting the sacred animals. Though many of the respondents indicated that they still believe that they may suffer catastrophes if they harm the sacred monkeys, other taboos in the same community that, in present times, have no other relevance apart from their sacred relevance were no longer observed by the people. One such taboo is the taboo that forbids visitation to the local stream when menstruating or with a black pot. It is inferable from the observation that the ‘no hunting, eating or harming of monkeys’ taboo has kept its sacred relevance and local acceptance because it has additional instrumental relevance.

Another way through which modernity has led to the loss of the traditional source-based legitimacy in the contexts studied is seen in the observation that the norms that agree with the present day commercially-oriented values of the local communities have kept their legitimacy, while those with no practical relevance, as judged by the current community values, have lost their legitimacy. The roots of modern local community values in Ghana and other African countries can be traced to colonization and the accompanying missionary work that introduced Christianity and formal education in these countries (Arowolo 2010; Debrunner 1967; Graham 1971; Kasongo 2010; Nunn 2010). The authors cited explain that colonization in the African context and the accompanying introduction of Christianity and formal education set in motion process of gradual adoption of western culture and values at the expense of traditional African culture and values. This trend continues today. Traditional values which are communal, hierarchical and fetish in nature continue to give way to modern values which are commercial in nature and based on scientific rational thinking. The implication for informal local forest management norms is that the norms that are perceived to be useful, according to the modern values, retain their legitimacy and the ones that are perceived to be no more relevant, according to the modern values, lose their legitimacy.

Importance of process and output based legitimacy

It is seen in Table 5 that the local norms whose legitimacies were based on process and output considerations have retained their legitimacies in the contemporary local communities. The detailed findings indicate that presumed fairness of the local norms influenced which of the local norms had legitimacy. The perception that the non-taboo local control norms in the private land contexts were fair is seen to be based on comparison with official decrees that have vested the management and economic rights to all naturally-grown trees in the State (Hansen 2011; Marfo 2009b; Ramcilovic-Suominena and Hansen 2012). The authors cited noted that the local control norm have more legitimacy locally than the

official decrees. The local people perceive the official decrees to be unfair because it denies them the right to benefit from naturally-germinated trees they nurture on their lands. The observation that the local norms have legitimacy when they are perceived to be fair underscores the importance of process-based legitimacy in the present day local communities. This has been noted by other authors (Bernstein 2005; Bodansky 1999; Franck 1990; Steffek 2003; Suchman 1995), who also highlighted the relevance of process-based legitimacy in contemporary society. Similarly, the study findings indicate that the instrumental relevance of the local institutions influenced which of them had legitimacy. The relevance of output-based legitimacy in contemporary society has also been observed by other authors (Bodansky 1999; Hogg et al. 2012; Horeth 1999; Horne 2009). These authors noted that with the breakdown of source-based legitimacy as local communities transform, process and output considerations have become more important providers of institutional legitimacy.

The Ghanaian context observations are consistent with the findings of other Ghanaian context studies (Ramcilovic-Suominena and Hansen 2012; Hansen 2011), which also argued that presumed fairness and instrumental relevance are key for the local acceptance and compliance with resource use rules and norms. It is important to note that in the private land contexts, the locally-legitimate local control norm replaced the official decrees on the use of naturally-grown timber on private lands. In addition to the fact that the official decrees have less local legitimacy, they are weakly enforced by the operational level forest officers (Marfo 2010; Ramcilovic-Suominena and Hansen 2012). This is especially so in domestic use situations where strict enforcement would require that rural people obtain their home use lumber from urban based sawmills and lumber markets. The associated transportation difficulty makes that impractical. The weak enforcement of the official decrees constitutes street level bureaucracy (Lipsky 1980), where operational level state officials exercise discretion in the enforcement of official laws to suit prevailing local conditions. The observed gap between what the official decrees prescribe and what is actually implemented is comparable to the observed differences in the manner in which different countries implement the international agreements that they adopt. For instance, because of differences in country situations, there are differences in the manner in which different countries are implementing the internationally-accepted concept of integrated water resources management (Agyenim and Gupta 2012; Funke et al. 2007; Maganga 2003; Petit and Baron 2009).

Conclusions

The findings of the study suggest that in postcolonial contexts with changing value systems like the Ghanaian local forest sites studied, mythical beliefs in gods and the harm they cause to people who flout their prohibitions have lost their relevance in providing legitimacy for informal local resource management norms. Consequently, informal local norms that derive their legitimacy from mythical beliefs alone have lost their relevance, as mechanism for controlling resource use, in contemporary times. To be functional and useful in contemporary local forest management, informal local norms require legitimacy from other considerations, such as their presumed fairness or instrumental relevance for achieving what local people want to do with their forests. For sacred norms, survival and functionality in contemporary local communities require that, in addition to their mythical importance, they also derive legitimacy from their instrumental relevance. The observation that locally-legitimate informal local norms are able to function in place of nationally-legitimate but locally-illegitimate official decrees in regulating local practice has

implication for the local institutions that need to be considered in the quest for effective and efficient local forest management.

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